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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KALAFUT, STEPHEN J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/733,335	Applicant(s) KIM, JOONG-HUN	
	Examiner Stephen J. Kalafut	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 1745

Claims 1, 6-9, 10 and 15-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 9, 10 and 18 recite the phrase "after being folded", which is unclear as to whether the electrode tabs must be folded for the claims to be met. Claims 6-8 and 15-17 recite that the folded portion of the insulating tape being a certain percentage of the width of the sealing surface, but do not recite which dimension of the tape is intended.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sasaki *et al.* (US 6,277,516).

Sasaki *et al.* disclose a pouch type lithium secondary battery (column 4, lines 60-64) that includes a planar rectangular battery unit (figure 8) where the polymer electrolyte would form the separator between the two electrodes. Each electrode is connected to a respective tab (3). The battery includes a package that is made of laminates (15, 16), which include upper and lower sealing surfaces fused together (column 9, lines 47-59). Around each tab is a layer of insulating tape (1), which is fused to the two sealing surfaces (column 8, lines 55-67), while extending

Art Unit: 1745

outside of them (figure 8). These claims are interpreted as not requiring any folding to take place before they are met.

Claims 1 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamashita *et al.* (US 6,841,298).

Yamashita *et al.* disclose a pouch type polymer electrolyte battery (1) that includes a planar rectangular battery unit (3) where the polymer electrolyte would form the separator between the two electrodes. Each electrode is connected to a respective tab (4). The battery includes a package (5) that includes upper and lower sealing surfaces fused together at a sealing area (5a). Around each tab is a layer of insulating tape (4s), which is fused to the two sealing surfaces (column 4, lines 22-26), while extending outside of them (figures 2a, 6 and 8). These claims are interpreted as not requiring any folding to take place before they are met.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 9-14 and 18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Daroux *et al.* (US 6,267,790).

Daroux *et al.* disclose a pouch type polymer electrolyte battery (10) that includes a planar rectangular battery unit (12) where the polymer electrolyte would form the separator between the

Art Unit: 1745

two electrodes. Each electrode is connected to a respective tab (16, 18). The battery includes a package (14) that is made of a laminate (20), which includes upper and lower sealing surfaces fused together (column 6, lines 18-29). Completely wrapping each tab is a band (62, 64) of insulating tape, which extends outside of end of the package when the tabs are folded (figures 6 and 8). The folded tabs and insulating tape thereon extend from an end portion of the package toward the middle thereof, and come into contact with the end portion. The two bands of tape may also be thermally fused to the casing (column 7, lines 5-16). Daroux *et al.* do not explicitly mention that their cell is a lithium secondary cell, but they incorporate by reference patent no. 5,183,715 to North (column 5, lines 48-50), who discloses this type of system for polymer electrolytes. See North, column 1, lines 12-29. Thus, Daroux *et al.* disclose all the limitations of the present claims. At best, given the teaching of Daroux *et al.* that the polymer electrolytic cell is conventional in the art (column 5, lines 53-55), it would be obvious to the ordinary artisan to select appropriate materials for the electrodes thereof.

Claims 6-8 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daroux *et al.*

These claims differ from Daroux *et al.* by reciting the relative sizes of the folded part of the insulating tape and the sealing surface of the casing. Since this would depend on the size of the tabs, the artisan would be able to optimize the relative sizes of the tape and the sealing surface due in view of the tab size needed to obtain output current and the mechanical stresses of sealing. For these reasons, these claims would be obvious over Daroux *et al.*

Art Unit: 1745

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Koike *et al.* (US 4,664,994), Moulton (US 5,449,575) and Goto (US 6,444,351) disclose flat cells with insulating members around their electrode tabs.

The disclosure is objected to because of the following informalities: On page 6, in section 0030, the item denoted by numeral 30 is called a "lithium secondary electrode", said to comprise "a battery unit". How an electrode can comprise a battery unit is unclear. Should the item denoted by numeral 30 instead be a "lithium secondary battery"? The letter "C" in figure 4 is not identified in the specification. Appropriate correction is required.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is 571-272-1286. The examiner can normally be reached on Mon-Fri 8:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1745

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sjk


STEPHEN KALAFUT
PRIMARY EXAMINER
GROUP 1700